IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

TGIP, INC.,	§	
	§	
Plaintiff,	§	
	§	Civil Action No. 2:06-CV-105
AT&T CORP.,	§	
	§	
Defendant.	§	JUDGE RON CLARK
	§	
	§	
	§	

ORDER ON DEFENDANT'S MOTIONS FOR JUDGMENT AS A MATTER OF LAW,

Plaintiff, TGIP Inc., claimed infringement of two patents relating to prepaid calling cards. The jury returned a verdict that was adverse in all respects to Defendant, AT&T Corporation, which timely made and renewed motions for judgment as a matter of law ("JMOL") on alternative grounds. [Docs. #469, #472, #478, #479, & #512]. AT&T's three arguments for JMOL on the issue of noninfringement are summarized as follows:

a. The claims teach that the call authorization amount of a card or account is not linked to a security number until the card or account is activated, whereas the call authorization amount in the accused system and method (hereinafter referred to as "the AT&T System") is linked with the security number before activation;

b. TGIP failed to prove infringement of the '114 patent because AT&T uses two different numbers for activation of cards and for making calls, while the claims specify a single number; and

c. TGIP's claims rest on a theory of joint infringement that cannot be sustained from the record.

AT&T further asserts that it is entitled to JMOL on the issue of willful infringement, and on the grounds of invalidity, laches and equitable estoppel. The court grants AT&T's motion for judgment as a matter of law based on noninfringement on the ground that the card

authorization amount in the AT&T System is linked before activation. Alternatively, the motion for JMOL on the ground of willfulness is granted because TGIP did not prove by clear and convincing evidence that AT&T knew, or should have known, that it acted in the face of an objectively high risk of infringement of a valid patent. All other motions for JMOL are denied.

I. PROCEDURAL HISTORY

On March 17, 2006, TGIP filed suit against AT&T alleging infringement of United States Patent No. 5,511,114 ("the '114 patent") and United States Patent No. 5,721,768 ("the '768 patent"). On June 12, 2006, the case was transferred to this court, which conducted a *Markman* hearing and issued an order construing the disputed claim terms [Doc. #238]. Definitions of agreed terms are set out in Doc. # 237. Subsequently, the court granted summary judgment as to invalidity of Claim 7 of the '114 patent, and denied summary judgment as to invalidity of Claims 1 and 6 of the '114 patent, and Claim 7 of the '768 patent. [Doc. # 278].

Issues concerning Claims 1 and 6 of the '114 patent, and Claims 1 and 11 of the '768 patent were tried to a jury from September 5 - 14, 2007.[1] After deliberating for about an hour, the jury returned a verdict finding the patents valid and willfully infringed by AT&T. The jury awarded TGIP damages in the amount of $156,289,609.00, and found that the claims were not barred by laches or equitable estoppel.[2]

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[1]At trial, TGIP stipulated to the dismissal of Claims 2-5 of the '114 patent, Claims 2-3 and 5-10 of the '768 patent.

[2]The parties agreed to submission of these issues to the jury for advisory purposes.

Defendant now moves the court for JMOL under Fed. R. Civ. P. 50(b) on the following issues: 1) no infringement of the '114 patent; 2) no infringement of the '768 patent; 3) wilfulness; 4) invalidity; 5) laches; and 6) equitable estoppel.

II. PATENT BACKGROUND AND TECHNOLOGY

A. The '114 Patent

The application that led to the '114 patent was filed on June 6, 1994, and the patent issued on April 23, 1996, naming Charles J. Stimson and Brady S. Beshear as inventors. The '114 patent relates to a prepaid calling card system having a remote terminal to provide on-site activation and re-charging of calling cards. The system includes four main functional components: a plurality of calling cards; a host computer; a plurality of on-site activation terminals; and a call processor. Each of the calling cards preferably includes a body portion and a read-only memory stripe with a stored security number. The main management and processing of the system is accomplished by the host computer, which is capable of connecting to the telephone network. The host computer includes a database for storing security numbers associated with authorized calling cards. The data terminals are remote from the host computer and are capable of being connected for transmitting data between the terminals and the host computer. The call processor is controlled by the host computer for connecting one or more customers to the telephone network using the authorized calling cards.

TGIP contends that AT&T infringes independent Claims 1 and 6 of the '114 patent. These claims describe pre-paid calling systems that allow customers to purchase calling cards and to use the calling cards to access a telephone network. '114 Patent, col. 6, ll. 1 - 45; col. 6, l. 58 - col. 8, l. 8.

B. The ' 768 Patent

The ‘768 patent is a continuation in part of the ‘114 patent. The application for the ‘768 patent was filed on November 18, 1996, and the patent issued on February 24, 1998, naming Stimson and Beshear as the inventors. On July 6, 2000, TGIP asked the United States Patent and Trademark Office (“USPTO”) to reexamine the ‘768 patent in light of Japanese Published Patent Application, HEI 4[1992]-23659, by Kozo Yamaki, entitled “CARD TYPE CONTROL SYSTEM” published on January 28, 1992 (“Yamaki publication”). After reexamination, the Examiner issued a Reexamination Certificate on March 1, 2005.

Focusing on the ways in which it is different from the ‘114 patent, the ‘768 patent discusses an alternative embodiment not discussed in the ‘114 patent, whereby a user may activate or recharge a pre-paid card account with an authorized dollar amount at a user activation terminal. The pre-paid card account may then be used to purchase various goods and services up to the authorized dollar amount. The activation terminals are connected to a main processor, which includes a host computer responsible for management and processing of the system through a purchasing network. The host computer includes a database for storing security numbers associated with authorized card accounts and enables users to purchase goods and services up to authorized dollar amounts using the authorized pre-paid card accounts. TGIP alleged that AT&T infringes Claims 1 and 11 of the ‘768 patent.

III. STANDARD AND SCOPE OF REVIEW

JMOL for a party is appropriate when "there is no legally sufficient evidentiary basis for a reasonable jury to find for that party on that issue." Fed. R. Civ. P. 50(a), *See Reeves v. Sanderson Plumbing Products, Inc.,* 530 U.S. 133, 150, 120 S.Ct. 2097, 2109 (2000). The Federal Circuit reviews an appeal from a grant or denial of a motion for JMOL under the law of the regional circuit in which the appeal from the district court would usually lie. *See ACCO Brands, Inc. v. ABA Locks Mfr. Co. Ltd.*, __ F.3d __, 2007 WL 2609976, *3 (Fed. Cir., Sept. 12, 2007). A finding of patent infringement by a jury in a federal district court in Texas is reviewed under the "substantial evidence" rule. *Id.*

"Substantial evidence is more than a mere scintilla. It means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." *Eli Lilly & Co. v. Aradigm Corp.* 376 F.3d 1352, 1363 (Fed. Cir. 2004).[3] A post-trial motion for JMOL should only be granted when the facts and inferences so conclusively favor one party "that reasonable jurors could not arrive at a contrary verdict." *Tol-O-Matic, Inc. v. Proma Produkt-Und Marketing Gesellschaft m.b.H.,* 945 F.2d 1546, 1549 (Fed. Cir. 1991) (internal quotations omitted). If reasonable persons in the exercise of impartial judgment could differ in their

[3]Of course, a court must be careful to determine which party had the burden of proof, and what that burden is. If a party has the burden of proof and the jury fails to find in its favor, it is not precisely correct to say that there must be substantial evidence supporting the non-movant. If there is no evidence on an issue, the party with the burden of proof should lose. Even where movant presented an interested witness on an issue, and non-movant presented no witnesses, the jury might simply have decided that movant's witness was not credible and was impeached by cross-examination. Where the party with the burden of proof by clear and convincing evidence fails to obtain a favorable finding, more will be needed to overturn the verdict. *Eli Lilly & Co*, 376 F.3d at 1363.

interpretations of the evidence, then the motion should be denied. *Tol-O-Matic, Inc.*, 945 F.2d at 1549.

In entertaining a motion for judgment as a matter of law, the court must review all of the evidence in the record. *Reeves,* 530 U.S. at 150, 120 S.Ct. at 2110. In doing so, "the court must draw all reasonable inferences in favor of the nonmoving party, and it may not make credibility determinations or weigh the evidence." *Id.* "Credibility determinations, the weighing of the evidence, and the drawing of legitimate inferences from the facts are jury functions, not those of a judge." *Id.* Thus, although the court should review the record as a whole, it must disregard all evidence favorable to the moving party that the jury is not required to believe. *Id.* That is, the court should give credence to the evidence favoring the nonmovant as well as that "evidence supporting the moving party that is uncontradicted and unimpeached, at least to the extent that evidence comes from disinterested witnesses." *Id.*

A party moving for a judgment as a matter of law must first do so at the close of all evidence in order to renew such a motion after judgment has been rendered. *Taylor Pub. Co. v. Jostens, Inc.*, 216 F.3d 465, 471 (5th Cir. 2000); Fed. R. Civ. P. 50(b). There are instances where "technical noncompliance" with Fed. R. Civ. P. 50(b) has been excused when purposes of the rule have been satisfied. *See Alcatel U.S.A., Inc. v. D.G.I. Technologies., Inc.*, 166 F.3d 772, 780 (5th Cir. 1999); *but see Delano-Pyle v. Victoria County*, 302 F.3d 567, 573 (5th Cir. 2002) (finding that a motion not renewed at the close of evidence to be waived). Therefore, any arguments made which were not asserted at the close of the evidence are deemed waived. *Taylor Pub. Co.*, 216 F.3d at 471.

IV. LITERAL INFRINGEMENT

TGIP agreed that the AT&T System does not literally infringe Claims 1 and 6 of the '114 patent. Tr. at 447:12-18. Thus, as to literal infringement, the court submitted to the jury only the question of whether the AT&T System literally infringes Claims 1 and 11 of the '768 patent. The jury answered in the affirmative. AT&T argues that the claims require the call authorization amount for the cards to be linked with the security number at the time the card is activated, while in the AT&T System, the call amount is linked with the security number or account before activation. JMOL on the issue of literal infringement "is appropriate if no reasonable fact finder could determine that the accused devices meet every limitation of the properly construed claims." *Elkay Mfg. Co. v. Ebco Mfg. Co.,* 192 F.3d 973, 980 (Fed. Cir. 1999).

A. Law on Infringement

Infringement analysis is "a two-step process in which we first determine the correct claim scope, and then compare the properly construed claim to the accused device to determine whether all of the claim limitations are present either literally or by a substantial equivalent." *Renishaw PLC v. Marposs Societa' Per Azioni*, 158 F.3d 1243, 1247-48 (Fed. Cir. 1998). Claim construction is an issue of law. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 390-91, 116 S. Ct. 1384, 1396 (1996). A determination of infringement, whether literal or under the doctrine of equivalents is a question of fact. *Biovail Corp. Int'l v. Andrx Pharms., Inc.*, 239 F.3d 1297, 1300 (Fed. Cir. 2001).

To show direct infringement, a "plaintiff must establish by a preponderance of the evidence that one or more claims of the patent read on the accused device literally or under the doctrine of equivalents." *Adv. Cardiovascular Sys., Inc. v. Scimed Life Sys., Inc.*, 261 F.3d

1329, 1336 (Fed. Cir. 2001). For literal infringement, "every limitation set forth in a claim must be found in an accused product, exactly." *Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1575 (Fed. Cir. 1995). Any deviation from the literal claim language precludes a literal infringement finding. *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1330 (Fed. Cir. 2001).

B. Claim Construction[4]

The court construed "associating" to mean that as part of the activation process, *and not before,* the amount of call authorization is linked in the host computer database to a security number for that card. This construction rejected TGIP's argument, renewed at the charge conference, that cards described by the patents-in-suit could have one preset amount printed and coded on the card. In the *Markman* Order, the court stated that cards meeting the following scenario would not be covered under the '114 or '768 patent.[5]

> Scenario 1: Cards of say $5.00 or $10.00, etc., where the security number is pre-associated with that amount at the host computer, but the card is not valid until it is "swiped" at the point of sale so the host computer knows it is activated. (In other words the host computer database already "knows" the security number of the card and the amount of the card, and all that is needed is to validate or activate the card).

C. Analysis

I. The AT&T System

TGIP's witnesses described the AT&T System as operating with three components: calling cards, data terminals, and a host computer. Tr. at 330. The front of the calling card

[4]For the court's analysis of the disputed claim terms, see the *Markman* Order [Doc. #238].

[5]The court reasoned that "[t]o define the terms at issue so broadly as to encompass the system of scenario 1 above, would simply ignore [the] statement to the USPTO, and would define 'authorizing' as simply meaning 'validating.'" [Doc. #238] at 11.

includes an amount (i.e. 50 minutes, 100 minutes, 150 minutes), and the back of the card includes a barcode, magnetic stripe, PIN number, and directions on how to use the card. *Id.*

The barcode enables a store to scan the card optically in order to obtain information such as the price of the product. Tr. at 330-332. After the barcode is scanned, the card is swiped through a magnetic card reader or data terminal so that data encoded on the magnetic stripe can be read electronically. *Id.* When the data terminal receives information from the magnetic stripe, it creates a request to send to the host computer. *Id.* After the host computer receives the information, it begins a process of checking to see whether the card control number is allowable, whether the card has not expired, and whether the card is eligible for activation. *Id.*; Tr. at 373-374.

The host computer also copies the call authorization amount stored in the PIN record of the CARDINFO table of the database into a PINMOD table. Tr. at 377-378. If all of the checks clear, the host computer sends a response back to the data terminal showing that the card is activated. *Id.* If the customer wishes to add more minutes to the card after this process, the customer may do so in increments of 10 minutes. *Id.* To make a call, the customer calls a number (such as a 1-800 number) to access the host computer and then enters the PIN number on the back of the card. *Id.*

TGIP's expert witness, Dr. Stephen Szygenda, testified that for every card in the AT&T System, the "denomination is in the database at the host computer *before* the card is ever printed." Tr. at 430:13-15 (emphasis added). He stated that "the host computer knows *before* the card is swiped that there is a particular control number and a particular amount, whether it is in dollars or minutes, that is associated with that particular card. It's in a field. It's in a populated field in a database, both those numbers, in the same table." Tr. at 457:2-7 (emphasis

added). He admitted that "*before* the card is even printed, there is an amount or denomination . . . in that database and there is a control number or . . . security number." Tr. at 454:24 - 455:2 (emphasis added).[6]

Claims 1 and 11 of the '768 patent recite "activating the particular pre-paid calling card account . . . in response to receipt of the activation information by associating an active call authorization amount with the particular pre-paid calling card account." The host computer in the AT&T System does not meet this claim limitation. Dr. Szygenda's testimony reveals that the host computer database of the AT&T System already "knows" the security number of the card and the amount of the card before activation. TGIP's expert, Mr. Richard Chandler, confirmed that in such a situation, the product would operate "fundamentally differently than the inventions disclosed in the '114 and '768 patents." Tr. at 1256:4-1257:10.

TGIP argues that the sequence of checks or the updates that take place in the CARDINFO and PINMOD database tables in the AT&T System means that the data terminal does not automatically let the host computer "know" that the card has been activated. However, even if the host computer declines to activate a card because it fails to pass the check, i.e. the card is expired, it is still true that each card's denomination or call authorization amount is already stored in the database. This evidence only shows that the card can be checked against a denomination stored in the database as a security measure during activation because the amount is already pre-linked to the card's security number in the database before activation. Similarly, simply copying the call authorization amount to the PINMOD table in

[6]AT&T's expert witness, Mr. Vince LaCava, confirmed that the amount to be used to pay for call service is linked to the PIN number of the card in the database "at the time of the creation of the PIN," before the card is printed and sold. Tr. at 793:25-794:8. "[N]othing happens to that link" during activation. Tr. at 794:9-10.

the database does not prove infringement because the card's denomination is already stored in the CARDINFO table of the database. In short, each card's denomination or call authorization amount has already been generated, printed and stored in the CARDINFO table regardless of whether it can later be modified or copied.

TGIP consistently emphasized that AT&T's cards allow minutes to be added after the card is activated as a "recharge" function. TGIP presented evidence that minutes can be added at the time of purchase of the card or in subsequent visits to a store. Such evidence lends no support to their argument.

The claim language explicitly distinguishes between "recharge" and "activation." *See* '768 patent, Claims 2, 3, 6, 10, and 11. The court stated in the *Markman* Order that "recharge information" means "data transmitted that makes it possible to associate a dollar amount with a particular *previously activated* calling card account." Moreover, Dr. Szygenda testified that the clerk would have to swipe the card once to activate the card and then a second time to add time to the previously-activated card. Tr. at 440:14-25; 464:14-16. Recharging a card is a separate process that occurs *after* activation, and cannot be substituted for activation. The fact that the accused card may read on the recharge limitation of a claim does not mean that it reads on every limitation of that claim. Accordingly, the recharge function does not support the jury verdict.

ii. The Datawave System

TGIP contends that the AT&T System infringes because it is "reasonably capable" of practicing the "associating" limitation of the claims. TGIP argues that there is some evidence that AT&T had at one time produced a product known as Datawave cards, for a previous

customer that could be activated with a variable amount on a specialized system.[7] AT&T argues that there is no evidence that AT&T's normally configured system - as it actually existed during the relevant period and as used for the cards shown to be offered during the relevant period - allowed a retailer to enter a variable initial activation amount.

The fact that a device is "capable of being modified to operate in an infringing manner is not sufficient, by itself, to support a finding of infringement." *Telemac Cellular Corp.,* 247 F.3d at 1330. The device must be "reasonably capable" of a use that infringes the patent. *In re Certain Surveying Devices,* 214 U.S.P.Q. 900, 903 (1981)("Although 'mere capability' does not constitute infringement, 'reasonable capability' does"). "If a device is designed to be altered or assembled before operation, the manufacturer may be held liable for infringement if the device, as altered or assembled, infringes a valid patent." *High Tech Med. Instrumentation, Inc. v. New Image Indus., Inc.,* 49 F.3d 1551, 1556 (Fed Cir. 1995)

Courts have examined the "capability" of a device to infringe in both a physical and a functional sense. Physically, if the accused device is capable of operating in an infringing mode with relatively little difficulty, then it is more likely that it will be found reasonably capable of an infringing use. *See, e.g. Intel Corp. v. United States Int'l Trade Comm'n,* 946 F.2d 821, 832 (Fed. Cir. 1991)(device programmable, as made and sold, to perform patented function, deemed presently capable and therefore infringing); *cf. Telemac Cellular Corp.,* 247 F.3d at 1316 (mobile telephone system not reasonably capable of infringing due to a restriction built into the software program stored in the telephone's memory, which prevented customers

[7]Only limited evidence about Datawave was presented. At trial, the court sustained an objection to testimony from TGIP's expert, Mr. Charles Stimson, about the Datawave cards because no such information was properly disclosed in his expert report. Tr. at 381-382. Later, TGIP began discussing the Datawave cards again, and AT&T failed to object, which allowed some evidence about the Datawave cards to be introduced. *See* Tr. at 815-816.

from operating system in infringing manner); *High Tech Med. Instrumentation, Inc.,* 49 F.3d at 1556 (dental camera that could operate in infringing manner only by loosening set screws that "rigidly coupled" the camera to its housing was not reasonably capable of infringing use).

Functionally, if consumers of the accused device actually use a device in a modified configuration, it again militates in favor of examining the device in its modified form in conducting an infringement analysis. *See e.g., High Tech Med. Instrumentation, Inc.,* 49 F.3d at 1555 (directing district court to consider whether dentists actually used dental camera in modified infringing mode).

The basic question is whether AT&T's computerized system infringes a patent claim because it is possible that AT&T could reprogram the system in ways that would infringe the claim. Five factors, outlined in *High Tech Med.* guide the court in making this determination: 1) whether the accused infringer "intended or anticipated" that consumers would modify the accused device to operate in an infringing manner; 2) whether the device was "designed to be altered or assembled" before operation; 3) whether the device was "actually operated" in an infringing manner; 4) whether the accused infringer's promotional materials refer to an infringing use; and 5) whether the device "would serve any functional purpose" in its modified configuration "not already accomplished" by other configurations. *See Id.* at 1555-1556.

As to the first *High Tech Med.* factor, TGIP presented no evidence that the consumers would be able to modify the AT&T Systems by themselves. The second factor addresses whether the device was "designed to be altered or assembled" before operation. In *High Tech Med.*, the Federal Circuit relied upon two other cases when discussing this factor, *Paper Converting Machine v. Magna-Graphics, Corp*, 745 F.2d 11, 18-20 (Fed. Cir. 1984) and *Hansen v. Siebring,* 231 F.Supp. 634, 644 (N.D. Iowa, 1964). These cases demonstrate the

inapplicability of this factor to the variable-amount cards. In both *Paper Converting Machine* and *Hansen,* the defendants deliberately sold the accused device in pieces to be assembled by the customer, and the assembled device served no useful non-infringing purpose.

There is no evidence that AT&T deliberately sold or used a system that was intended to be altered to read on one or more of the claims in suit. It is probably true that a skilled programmer could write software for the computers used by AT&T that would operate the system in the way described by the patents. Yet the same skilled programmer could alter or rewrite programs of a general purpose computer to do almost anything computers can do. That does not mean that all computer-dependent systems are designed to be altered so as to infringe on every patent that incorporates a general purpose computer.

This is not the same issue as in *Intel Corp.*, where the claim language described a "programmable selection means" and an alternate addressing mode that could be selected. In that case, the accused device was capable of operating in the same mode as the invention. 946 F.2d at 832.

The third *High Tech Med.* factor is whether the AT&T System was "actually operated" in an infringing manner. TGIP asserts that the existence of the Datawave cards shows that AT&T had developed a special application that allowed at least one customer to activate variable-amount cards. Dr. LaCava testified as follows:

> Q. All right. So, let me go through, as to this one particular table, the issue of whether it's pre-linked or not. For all your customers out there, it's not always the case that after an activation, that the balance field is going to be the exact same number that was prepopulated earlier in this table; isn't that right?
>
> A. For 99 percent of them.
>
> . . .
>
> Q. This system of yours, AT&T"s, will support and is able to work with variable- or flexible-denomination cards, right?

> A. Only for that one particular retailer.
>
> Q. And if more retailers in the future choose to adopt variable-denomination cards, flexible cards, your system is capable of handling that, correct?
>
> A. We'd have to develop that on a retailer-by-retailer basis.
>
> Q. Well, you can already do it for one; so, of course, you can do it for more, can't you?
>
> A. Each point-of-sale activation server that is used for the retailer is unique and different and allows certain features. This one customer has a special application with it that allows it to do this variable denominator. Tr. at 802:13 - 803:21.

This testimony could raise an inference that the Datawave system met the claim limitation that requires association of the call authorization amount with the security at the time of activation, and not before. But there is no evidence that the Datawave system met any other claim limitations, so there is no evidence from which a reasonable jury could find that the "special application" known as the Datawave system itself met all of the limitations of any claim. And, as discussed above, the fact that a system's computer can be reprogrammed with new algorithms does not necessarily mean that the system infringes.

A fourth factor the court must consider is whether AT&T's promotional materials referred to an infringing use. TGIP provided evidence that in a specification for one of AT&T's clients, Sam's Club, AT&T had planned to create a platform that "initializes the purchased number of minutes" during activation. *See* PX 147 at 3. However, there is no evidence that the AT&T System actually functions in such a manner or that Sam's Club actually used the AT&T System in such a manner. At trial, Dr. LaCava stated that:

> Q. . . . If one of your other customers came to you and said, "We want that, too," you could do it with your system, couldn't you?
>
> A. I'd have to develop it, yes. Tr. at 802-803.

The fifth factor to be considered is whether the Datawave system would provide any functional purpose that is "not already accomplished" by the normal AT&T System. TGIP spent a significant amount of trial time establishing that the "recharge" feature of the accused AT&T System can, with a second transaction or "swipe" taking but a few seconds, provide a customer with a calling card with an increased or variable denomination. This factor cuts against a finding that the AT&T system infringes.

TGIP had the burden to prove infringement by a preponderance of the evidence. As discussed above, there was no evidence that the Datawave system itself met all of the limitations of any claim. Likewise, the limited evidence that AT&T developed the Datawave cards for a customer shows only that AT&T could, if it wanted to, develop a variable-amount card. That is no evidence that the accused system or method infringed.

It may be that a theory of infringement might be based upon a showing that a few keystrokes could reprogram the AT&T System into an infringing product. However there was no evidence about how difficult it would be to reprogram or reorganize the present AT&T System so as to allow association of call authorization amounts with a security number at the time of activation. The court cannot find, and the parties do not point to, any case where the Federal Circuit holds that a computerized system infringes if it can be reprogrammed into an infringing use. The articulation of such a test must be left to the legislature or the higher courts.

Considering all of the evidence, and drawing all reasonable inferences in favor of TGIP, it is clear that the AT&T System associates the number of minutes on a card with the security number long before the card is activated. The court construed "associating an active call authorization amount with the particular pre-paid calling card account," as requiring the

association to occur "as part of the activation process, *and not before*." [Doc. 238, p. 12 of 28](emphasis added). Given that the jury was bound to accept this construction, there is no substantial evidence that the accused AT&T system or method literally infringes Claims 1 and 11 of the '768 patent.

IV. DOCTRINE OF EQUIVALENTS

The jury found that the AT&T System infringes Claims 1 and 11 of the '768 patent, and Claims 1 and 6 of the '114 patent under the doctrine of equivalents. AT&T argues that TGIP presented no evidence as to this point, and that any differences between the patent claims and AT&T's System are fundamental rather than insubstantial.

A. Law on Doctrine of Equivalents

The essential inquiry under the doctrine of equivalents is whether the accused product or process contains elements identical or equivalent to each claimed element of a patented invention. *Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 40, 117 S.Ct. 1040, 1054 (1997). Infringement under the doctrine of equivalents requires that any differences between the patent claims and the accused product or method be merely "insubstantial," not fundamental. *Moore U.S.A., Inc. v. Standard Register Co.,* 229 F.3d 1091, 1106 (Fed. Cir. 2000). The application of the doctrine of equivalents should not allow such "broad play as to effectively eliminate that element in its entirety." *Warner-Jenkinson Co., Inc.,* 520 U.S. at 29, 117 S.Ct. at 1049. Under the "specific exclusion principle," "the concept of equivalency cannot embrace a structure that is specifically excluded from the scope of the claims." *Athletic Alternatives, Inc. v. Prince Mfg., Inc.,* 73 F.3d 1573, 1582 (Fed. Cir. 1996).

B. Analysis

TGIP presented no testimony addressing infringement of the '768 patent under the doctrine of equivalents.[8] TGIP does not address infringement of the "associating" limitation of the '114 patent under the doctrine of equivalents in its response to AT&T's JMOL. As discussed above and in the *Markman* Order, the patents specifically exclude cards for which the amount of call authorization is pre-linked with the security number or account before activation.

TGIP's expert, Mr. Chandler, admitted that cards for which "the denomination or the face value of the card is stored in the database beforehand" operate "fundamentally differently than the inventions disclosed in the '114 and '768 [p]atents" for which "[t]he amount of call authorization was truly determined at the time of sale." Tr. 1256:4 - 1257:10.

There is no evidence that the AT&T System uses cards that are not pre-linked or pre-populated with a call authorization amount before activation. Accordingly, AT&T cannot infringe the '768 or '114 patents as a matter of law because the AT&T System does not practice the "associating" limitation under the doctrine of equivalents.

V. OTHER GROUNDS OF NONINFRINGEMENT

AT&T argues that beyond the failure to meet the claimed "associating" limitation, AT&T does not infringe because: 1) the cards in the AT&T System do not use the same security number both to activate the card and to make calls; and 2) TGIP's claims rest on a theory of joint infringement that cannot be sustained on the record.

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[8]At the charge conference, the court asked plaintiff's counsel, "You're saying that you don't believe [that AT&T infringed the '768 patent under the doctrine of equivalents] and you didn't present evidence on it, but you want the jury to find it?" Plaintiff's counsel answered "If [the jurors] think we're lying and we're wrong but we're only insubstantially lying and wrong, [the jurors] can find it."

A. Security Number Limitation

AT&T states that TGIP is estopped from applying the doctrine of equivalents to the security number limitation because TGIP added a *single* security number limitation to the claims of the '114 patent specifically to avoid prior art showing the use of two different card numbers.

A patentee is precluded from the application of the doctrine of equivalents to a claim element that was narrowed by amendment during prosecution in response to a rejection. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.,* 535 U.S. 722, 734, 122 S.Ct. 1831, 1838 (2002); *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.,* 493 F.3d 1368, 1382 (Fed. Cir. 2007). The text of the amendment as applied to the relevant claim limitation is as follows, with additions underlined and deletions bracketed:

- means for [reading a calling card to determine] entering the security number [stored in the read-only memory thereof]; (Claim 1)
- means for connecting to the host computer to transfer the security number, the call authorization amount and an identification code associated with the data terminal; (Claim 1)
- a call processor [controlled by the host computer for interfacing one or more customers to the telephone network using the authorized calling cards] responsive to entry of a security number for enabling the customer to access the telephone network using the telephone. (Claim 1)
- means for reading a calling card to determine the security number [stored in the read-only memory thereof]; (Claim 6)
- means for [connecting] transferring to the host computer [to transfer] the security number, the call authorization amount and an identification code associated with the data terminal; (Claim 6)
- a call processor [controlled by the host computer for interfacing one or more customers to the telephone network using the authorized calling cards] responsive to entry of a security number by a customer for enabling the customer to access the telephone network using the telephone. (Claim 1)

AT&T's argument that the amendments narrowed the patent claims so that they require the use of the same security number *both* to activate the card *and* to make calls is unavailing. The Federal Circuit has repeatedly emphasized that an indefinite article "a" in patent parlance carries the meaning of "one or more." *LG Electronics, Inc. v. Bizcom Electronics, Inc.,* 453 F.3d 1364, 1372 (Fed. Cir. 2006). The amendments cited by AT&T do not confirm that the *Schilling* patent was different from the '114 because of a "single" security number. *See* May 18, 1995 Amendment for First Office Action at 2, 7-8.

Moreover, Dr. Szygenda provided the following testimony at trial:

> Q. . . . Why do you feel that transmitting a number that's an access number for the card that's mapped in the database of the host computer to the PIN is equivalent of just going ahead and transmitting the PIN itself?
>
> A. Because they perform the same function. They're identifying an account in the database. Tr. at 410:25 - 411:5.

The court must presume that the jury resolved any underlying factual dispute in favor of the verdict winner and leave such presumed finding undisturbed if it is supported by substantial evidence. *Tec Air, Inc. v. Denso Mfg. Michigan, Inc.,* 192 F.3d 1353, 1359 (Fed. Cir. 1999). Given the inapplicability of *Festo* and the evidence presented at trial, the court cannot agree with AT&T's argument that there can be no infringement because the AT&T System did not provide a *single* security number.

B. Joint Infringement

AT&T contends that it does not infringe because other systems (West Interactive and A.P.T.) provided the activation platform and that other retailers (such as Wal-Mart) provided the data terminals. AT&T states that there is no evidence that AT&T directed or controlled the third parties who performed steps essential to any finding of noninfringement.

In its recent decision, *BMC Resources, Inc. v. Paymentech, L.P.,* 498 F.3d 1373, 1379 (Fed. Cir. 2007), the Federal Circuit reiterated that "[i]n the context of patent infringement, a defendant cannot thus avoid liability for direct infringement by having someone else carry out one or more of the claimed steps on its behalf." "It is not necessary for the acts that constitute infringement to be performed by one person or entity. When infringement results from the participation and combined action(s) of more than one person or entity, they are all joint infringers and jointly liable for patent infringement. Infringement of a patented process or method cannot be avoided by having another perform one step of the process or method." *Id*. A party that controlled or directed third parties' actions is liable for direct infringement because "[i]t would be unfair indeed for the mastermind in such situations to escape liability." *Id.* at 1381.

TGIP presented evidence that AT&T "controlled or directed" the work that third-parties provided for AT&T to perform activation processes. *See* Tr. at 347:12 - 14. In fact, AT&T's corporate representative, Mr. Robert Carvelli, testified that "West acted *on behalf of* AT&T." Tr. 637:24 - 638:2; *see* Tr. 638:25-639:15; 641:2-646:16 (describing in detail how West implemented the system described to it by AT&T.)

TGIP also presented evidence that AT&T provided specifications to each of its retailers directing the retailers on the processes for sending an activation message to AT&T. Tr. 633:9-14. Mr. Carvelli testified that AT&T expected the information received from Wal-Mart in connection with an activation card to be in a certain format. Tr. 637:2 - 5. The format was defined by AT&T's technical plan, indicating what "requirements" were necessary in order for AT&T to provide its services to retailers. Tr. 637:10-16; PX147 at ATT002443.

AT&T is not entitled to judgment as a matter of law on the ground that there is no evidence of joint infringement.

VI. WILLFUL INFRINGEMENT

The jury found that AT&T's infringement of Claims 1 and 6 of the '114 patent, and Claims 1 and 11 of the '768 patent was willful. AT&T argues that no reasonable jury would have found that AT&T willfully infringed the patents-in-suit. The question may be moot, given the court's ruling on infringement, but will be addressed in the interest of a complete record.

A. Law on Willful Infringement

Under 35 U.S.C. § 284, the court may increase damages "up to three times the amount found or accessed." The Federal Circuit has announced a new standard for willful infringement: "a patentee must show by clear and convincing evidence that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent" and "that this objectively defined risk (determined by the record developed in the infringement proceeding) was either known or so obvious that it should have been known to the accused infringer." *In re Seagate Technology, LLC,* 497 F.3d 1360, 1370-71 (Fed. Cir. 2007). "The state of mind of the accused infringer is not relevant to this objective inquiry." *Id*.

B. Analysis

AT&T provided uncontradicted evidence that Mr. Samuel Dworetsky, an employee of AT&T, received, and relied upon, opinion letters from the law firm Morgan & Finnegan stating that the patents-in-suit were invalid and not infringed by the AT&T System. Tr. at 1139:11-14. The correspondence between AT&T's other counsel Akin Gump, and TGIP's predecessor, Call Processing Inc. ("CPI"), sets out AT&T's position that the patents-in-suit are invalid, referring to invalidity based upon the Yamaki publication and to noninfringement because of prior

activation of the cards. *See* DX 48 and 53. Then, as far as AT&T was concerned, CPI abandoned its claims of infringement after receiving this correspondence.

If AT&T had the burden of proof, this evidence would not conclusively prove that AT&T was objectively reasonable. However, TGIP had the burden to prove by clear and convincing evidence that AT&T knew, or should have known, that there was an objectively high likelihood that AT&T was infringing on one or both of the patents. In summary, TGIP's evidence in this regard consists of the 1998 and 1999 letters accusing AT&T of infringement, and the fact that the jury found infringement in 2007. This is only a scintilla of the evidence needed to meet the clear and convincing standard.

Even though AT&T ultimately did not prove its invalidity defense by clear and convincing evidence, its position was hardly objectively unreasonable. The patentee was concerned enough to ask for reexamination of the '768 patent, and to delay taking action on the '114 patent for six years. In fact, the USPTO did require changes to the '768 patent.

Likewise, it cannot be said there is clear and convincing evidence that it was known or obvious that there was an objectively high likelihood that AT&T's non-infringement position was incorrect. Even if the jury's finding of infringement is ultimately upheld, it was, at best, a very close question. Reasonable persons, properly instructed and exercising impartial judgement, could not find by clear and convincing evidence that AT&T acted in the face of an unjustifiably high risk of harm that was either known, or so obvious that it should have been known.

VII. INVALIDITY

A. Law on Obviousness

AT&T argues that it is entitled to judgment as a matter of law that the '114 and '768 patents are invalid because any reasonable jury would have found that the patents-in-suit were obvious under 35 U.S.C. § 103 in view of the prior art.[9] A patent may be shown to be obvious, and thus invalid, "if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious as of the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. § 103(a).[10]

Obviousness depends on an objective analysis by the fact-finder of (1) the scope and content of the prior art; (2) the differences between the claimed invention and the prior art; (3) the level of ordinary skill in the art; and (4) any relevant secondary considerations that give light to the circumstances surrounding the origin of the subject matter sought to be patented. *Graham v. John Deere Co. of Kansas City,* 383 U.S. 1, 17-18, 86 S.Ct. 684, 693 (1966). Relevant secondary considerations are such things as commercial success, long felt but unsolved needs, failure of others, and the presence or lack of some motivation to combine, or avoid combining prior art teachings. *KSR Int'l Co. v. Teleflex Inc* ., __ U.S. __, 127 S.Ct. 1727, 1734-35 (2007). "While the sequence of these questions might be reordered in any particular case, the factors

[9]AT&T withdrew its allegations that the '114 and/or '768 patents were anticipated by the prior art.

[10]The parties stipulated that a person of ordinary skill in the art at the time of the invention of the patents-in-suit would have had at least the equivalent of a four-year degree from an accredited institution in a field such as engineering or computer science with courses covering technical aspects of communication systems and computer systems, or a minimum of two years experience in developing calling card products for the calling card industry.

continue to define the inquiry that controls. If a court, or patent examiner, conducts this analysis and concludes the claimed subject matter was obvious, the claim is invalid under § 103." *Id* at 1734.

B. Analysis

AT&T had the burden of proving obviousness by clear and convincing evidence. *Takeda Chemical Indus., Ltd. v. Alphapharm Pty., Ptd.,* 492 F.3d 1350, 1355 (Fed. Cir. 2007); *PIN/NIP, Inc. v. Platte Chem. Co.,* 304 F.3d 1235, 1243 (Fed. Cir. 2002). The jury failed to find that the patents were obvious. To prevail on its JMOL, AT&T must show that the evidence so conclusively favored AT&T that reasonable jurors could not have reached that verdict. *Tol-O-Matic, Inc.,* 945 F.2d at 1549.

AT&T argues that it presented uncontradicted evidence that Claims 1 and 6 of the '114 patent are obvious in view of the prior art, namely the 1) Yamaki publication, 2) MCI prepaid calling card system ("the MCI System") and 3) Western Union prepaid calling card system ("the Western Union System"). AT&T argues that its expert, Mr. Arthur Butt, addressed each of these references and provided undisputed factual testimony about the ways in which the prior art references could be combined to eliminate any "differences" between them and the claims in the '114 patent. Specifically, AT&T contends that the Yamaki publication has a budget setting device that is located remotely from the principal device, which acted as a data terminal and a host computer. AT&T also states that it presented undisputed evidence that Yamaki's budget setting device receives funds in its safe after the principal device sends a verification message indicating that the ID code has been linked to the new balance. AT&T further contends that Yamaki publication discloses every limitation in the '114 patent claim limitations regarding the call processor.

AT&T states that its expert, Mr. Scott Ableman, provided uncontested evidence that the MCI and Western Union Systems included the record-keeping and billing functions that, when combined with the data-terminal-based prepaid calling card system of Yamaki, render all claims of the '768 patent invalid. AT&T argues that the MCI system included a security code that identified that retailer as being someone authorized to activate cards, and that the MCI system kept those records in a database. Tr. at 676:11-13; 681:3-6. AT&T contends that although MCI chose not to use the recharge function, that feature was fully supported by the MCI platform. Tr. at 684:10-23, 721:23-722:7. AT&T states that the Western Union system disclosed similar functionalities. DX 193, p. WU35 and WU88.

The court notes that the presentation of invalidity evidence at trial was, at best, confusing. Conclusory statements by experts are not "uncontradicted evidence" which the jury must accept. There was no lucid explanation as to how one of ordinary skill would combine the three references, nor what parts of each would make up the proper combination. It was not clear whether all three references would be needed, or if any two could be combined. There seemed to be little attempt to set out what structures or parts of systems, known in the prior art, were substituted for others known in the field to achieve a predictable result. While *KSR* no longer mandates evidence of a motivation or suggestion to combine prior art references, it could still be helpful to a jury (and the judge) to have an expert explain why the references would be combined, or why it was obvious to do so.

Even though it did not have the burden of proof on this issue, TGIP provided the following evidence that supports the failure of the jury to find obviousness:

- The MCI and Western Union Systems are not prior art because their commercial use began in August 1993 and "before early June 1993," respectively, which were after the initial conception of the '114 and '768 patents in June 1993. Tr. at 167-171.

- The Yamaki publication would not have prompted a person of ordinary skill in the art to add a remote location of data terminals, a call processor that allows recharge, and access through a PIN number. Rather, the testimony established that the Yamaki publication disclosed an on-premises localized system that requires physical insertion of a card into a specialized telephone terminal to make telephone calls. Tr. at 1291-1923.

- The MCI and Western Union Systems would not have prompted a person of ordinary skill in the art to add data terminals, allow billing or recharge. The systems successfully used a telephone instead of a data terminal to activate prepaid calling cards. Tr. at 1290:3-1303.

- One of ordinary skill in the art would not have combined the references because the Yamaki system is an entirely different sort of system from the MCI and Western Union Systems. Tr. at 1307 - 1308.

The court does not make credibility determinations and must draw all reasonable inferences in the light most favorable to the verdict. AT&T has not shown that the evidence points so conclusively in favor of a finding of obviousness that reasonable jurors could not arrive at a contrary verdict. *See Tol-O-Matic, Inc.*, 945 F.2d at 1549.

VIII. LACHES AND EQUITABLE ESTOPPEL

AT&T asserts that laches and equitable estoppel bar TGIP's recovery of damages for sale of the AT&T System. The parties agreed to submit these issues to the jury for an advisory verdict. The jury found that laches and equitable estoppel do not apply.

A chronology of events is helpful to the analysis:

April 23, 1996	USPTO issues the '114 patent, assigning it to CPI.[11]
February 24, 1998	USPTO issues the ' 768 patent, assigning it to CPI.
April 14, 1998	TGIP began corresponding with AT&T about its patents. Tr. at 281:24-284:18; Tr. at 536:20-537:13; DX 30.

[11]CPI is the predecessor in interest to TGIP. Both parties agree that CPI's actions may be imputed to TGIP.

January 25, 1999	TGIP threatens to "enforce its rights" in both patents against AT&T. Tr. at 286:20-287:14; 537:24-538:5.
July 7, 1999	TGIP wrote another letter to AT&T stating that it is infringing TGIP's patents. Tr. at 287:15-288:9; 538:19-539:4.
December 3, 1999	TGIP sent AT&T a letter indicating that it was "assum[ing] that AT&T does not wish to negotiate this matter beyond January 31, 2000." Tr. at 290:8-23; DX 51.
July 6, 2000	TGIP requests USPTO to reexamine the ' 768 patent to address prior art.
March 1, 2005	USPTO issues Reexamination Certificate to CPI on the ' 768 patent.
March 17, 2006	TGIP files this suit against Defendants asserting infringement of the ' 114 and '768 patents.

A. Law on Laches and Equitable Estoppel

I. Laches

A finding of laches only bars relief on a patentee's claim with respect to damages accrued prior to suit. *A.C. Auckerman Co. v. R.L. Chaides Constr. Co.*, 960 F.3d 1020, 1041 (Fed. Cir. 1991). To prove the affirmative defense of laches, a defendant must show that "the plaintiff delayed filing suit an unreasonable and inexcusable length of time after the plaintiff knew or reasonably should have known of its claim against the defendant; and . . . the delay resulted in material prejudice or injury to the defendant." *Wanlass v. General Elec. Co.*, 148 F.3d 1334, 1337 (Fed. Cir. 1998). Prejudice may be either evidentiary or economic. *Id.* at 1337. A delay in bringing suit may be "excused by a host of factors, including involvement in other litigation." *Hemstreet v. Computer Entry Sys. Corp.*, 972 F.2d 1290, 1293 (Fed. Cir. 1992).

A presumption of laches arises if the patentee delays bringing suit for more than six years after actual or constructive knowledge of defendant's infringing activities. *Wanlass*, 148 F.3d at 1337. "This presumption shifts to the patentee the burden of producing evidence, which

if believed, would show that either the patentee's delay was reasonable or excusable under the circumstances or the defendant suffered neither economic nor evidentiary prejudice." *Id.* at 1337. "[T]he patentee's evidence must be sufficient to raise a genuine issue of material fact about either the excuse for or reasonableness of the delay, or the existence of the prejudice." *Id.* at 1337. If such evidence is produced, then the presumption disappears and the defendant must affirmatively prove the elements of this defense. *See Hemstreet*, 972 F.2d at 1293. Regardless, at all times, the ultimate burden of persuasion with respect to proving laches remains with the defendant. *Auckerman*, 960 F.2d at 1038-39.

ii. Equitable Estoppel

"Where equitable estoppel is established all relief on a claim may be barred." *A.C. Auckerman Co.*, 960 F.2d at 1041. To prove the affirmative defense of equitable estoppel, a defendant must show: (1) the inventor or owner of the patent communicated in a misleading way that it would not sue the defendant; (2) the defendant substantially relied on the misleading conduct to its detriment; and (3) the defendant would be materially prejudiced if the suit were allowed. *Id.* at 1042-43. A defendant "must prove all of the factual elements of estoppel on which the discretionary power of the court rests,"and no presumption arises from any length of delay in bringing suit by a patent holder. *Id.* at 1043.

"Like laches, equitable estoppel is not limited to a particular factual situation nor subject to resolution by simple or hard and fast rules." *Auckerman Co.*, 960 F.2d at 1041. Moreover, "a trial court must, even where the three elements of equitable estoppel are established, take into consideration any other evidence and facts respecting the equities of the parties in exercising its discretion and deciding whether to allow the defense of equitable estoppel to bar the suit." *Id.* at 1043.

B. Analysis

I. Laches

AT&T argues that because there is at least a six year lapse between the patentee's first knowledge of infringement and the filing of suit for infringement, the defense of laches presumptively applies. While there was more than a six year delay between the first letter and the filing of this suit, this was not the only enforcement action taken by TGIP.

Involvement in other litigation may excuse a party from a delay in suit which gives rise to a laches defense. *Hemstreet*, 972 F.2d at 1293. Additionally, patent reexamination proceedings should be treated similarly to infringement actions for the purposes of laches. *Vaupel Textilmaschinen v. Meccanica Euro Italia SPA*, 944 F.2d 870, 877 (Fed. Cir. 1991).

On July 6, 2000, less than a year after the TGIP's final letter to AT&T, TGIP requested the USPTO to reexamine the '768 patent. While the reexamination proceedings applied only to the '768 patent, the '768 patent was a continuation of the '114 patent. The court cannot find that TGIP was required to file suit only on the '114 patent to prevent a finding of laches. Such a finding would undercut the reason for allowing a delay when a patent is in reexamination proceedings.

The court cannot find, and the parties do not point to, any Federal Circuit precedent discussing whether reexamination of a related patent would excuse TGIP's delay in asserting infringement of the '114 patent. Only a "*minimum quantum*" of evidence necessary to burst the presumption of laches. Higher courts may establish a rule that reexamination of one patent does not justify delay for a related patent. Under present law, the court concludes that reexamination of the '768 patent, in the context of the other events in the case, is sufficient explanation for the

delay. TGIP is not barred from recovery of damages on the basis of laches. *A.C. Aukerman Co.,* 960 F.2d at 1037.

ii. Equitable Estoppel

AT&T maintains that it was misled by TGIP's silence during license negotiations. "Silence alone will not create an estoppel unless there is a clear duty to speak or somehow the patentee's continued silence reenforces the defendant's inference from the plaintiff's known acquiescence that the defendant will be unmolested." *Auckerman*, 960 F.2d at 1043-1044. "Plaintiff's inaction must be combined with other facts respecting the relationship or contacts between the parties to give rise to the necessary inference that the claim against defendant is abandoned." *Id.* at 1042.

There is no evidence before the court to suggest that TGIP made any misleading statements to AT&T. TGIP produced evidence showing that during licensing negotiations in 1999, TGIP notified AT&T that TGIP intended to require companies in the industry to obtain licenses. The court finds that AT&T is not entitled to judgment as a matter of law on its affirmative defense of equitable estoppel.

IT IS THEREFORE ORDERED that AT&T's motions for judgment as a matter of law [Doc. #469, #472, #478 & #512] are **GRANTED** in part on the ground that the card authorization amount in the AT&T System is linked before activation and on the ground of willfulness, and **DENIED** as to other grounds stated.

IT IS FURTHER ORDERED that AT&T's Motion for Judgment as a Matter of Law on AT&T's Affirmative Defenses [Doc. #479] is **DENIED.**

IT IS FURTHER ORDERED that all other motions [Doc. #308, 311, 314, 321 and 384] are **DENIED as moot.**

So **ORDERED** and **SIGNED** this **29** day of **October, 2007.**

Ron Clark, United States District Judge